

REMARKS/ARGUMENTS

Title

Applicants wish to note that contrary to the title stated at paragraph 2 of the Office Action, the current title of the application is "PLC With Web-Accessible Program Development Software" pursuant to applicants' amendment mailed on January 6, 2006.

Claim Objection

Claim 1 was objected to for not defining "PLC" in the recitation of the elements. Claim 1 has now been amended to recite the PLC refers to a "programmable logic control". This is believed to avoid the cited objection.

Claim Rejections

Applicants' previous response amended the claims to change the original phrase "programming software" to the "program development software" as now reflected in the title. In response, the Office located the Bronikowski reference (U.S. Pat. No. 6,947,798), which has been combined with Papadopoulos, Lindner and others to reject the previously pending claims on grounds of obviousness. Applicants hereby further amend the claims to state that the program development software includes "application software". Thus, the claims recite a system for web access and control of remote devices in which the remote devices download from the web the actual software application (which can permit the remote users to generate new controller programs and modify exiting controller programs) in addition to any controller program download from the web. Support for this language is found throughout the application and can be seen most easily at page 7, lines 18 through 27.

The term "application" is believed to more clearly differentiate the software that forms the program executed by the industrial controller from a program used to develop

the program executed by the industrial controller, the latter pertaining to the application software. Thus, as now claimed, the present invention contemplates web service of both controller programs and the application that allows controller programs to be created or modified. In light of this amendment, the claim rejections of under 35 U.S.C. §103 is respectfully traversed.

The cited combination of references (Papadopoulos, Lindner and Bronikowski) fail to disclose a web access module that has "program development software including application software that can be utilized to generate a controller program for at least one of the PLC and one of the I/O devices" and is provided "onto the Internet for transmission to the remote device, so that the remote device is able to generate the controller program", per claim 1 of the present application.

As mentioned in applicants' previous response, Papadopoulos teaches the sending of commands to the PLC from a remote device that are generated using a program already in the remote device such as a standard web browser and not program development software transmitted from the PLC. The commands transmitted over the Internet may be readily distinguished from an application program which includes executable algorithms for generating a controller program. Lindner teaches a web server that may serve HTTP but not program development software including controller programs and application software for generating or modifying the controller programs.

Bronikowski teaches a way to develop software programs via multiple applications and users. As stated in the Abstract, the system executes "a first program to process information store within the memory so that the processed, stored information can be operated upon by a second program." The first program can (1) determine the identity of either the second program and a third program that generated the information, or (2) select portions of the stored information for use by the second program. Further, at the passages at col. 5, line 62 to col. 6, line 10, it is stated that the system memory acts as a repository for (1) "templates" (which are "program fragments" or "control variables" that have not been configured for operation in a specific control

program) and (2) "projects" (which are complete or incomplete control programs to be implemented by a PLC).

Thus, the Bronikowski reference concerns the combining of control programs or program fragments for implementation by one or more PLCs. It is not concerned with the distribution of application software to a remote device for generating or modifying controller programs remotely, as the present claims now more clearly recite. As such, this newly cited reference does not provide the teaching missing from the other references cited.

In addition, these references fail to recognize or provide the express benefits of the present invention. For example, as noted at page 8, lines 18 through 29, the present invention allows updated versions of the application software to be instantly accessible to remote users or any user programming the PLC thus greatly simplifying maintenance of program development tools. Nor do the references recognize or provide a system that ensures that the program development tools compatible with a particular PLC are always available even locally. The references also fail to provide a method of allowing any user to purchase programming software on an as needed basis, or allow complex programming tasks to be performed remotely with simplified versions of the application software to be downloaded to the remote device while other development tasks are retained by the PLC. Thus, the references fail to recognize or suggest further modification that would satisfy their deficiencies.

For the reasons stated above, it is believed that independent claims 1, 15 and 18 are now in condition for allowance as well as those claims dependent on these claims, and therefore, allowance of claims 1-20 is respectfully requested.

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No fees are believed due for consideration of this response. However, any fee deemed necessary should be charged to Deposit Account No. 17-0055.



Respectfully submitted,

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